

Appl. No. 09/598,110
Amdt. dated February 21, 2006
Reply to Office action of 08/18/05

Please replace the paragraph on page 3, line 10 with the following edited paragraph:

A first embodiment of a sports training and conditioning device constructed according to the principles of this invention is indicated generally as 20 in FIGS. 1 through 3. The device 20 is particular adapted for training and conditioning for sports which involve the use of an implement having a grip, e.g., a bat, a club, a racket, or a stick, and in particular device 20 is adapted for training and conditioning for baseball, softball, and other sports which employ a bat. The device 20 comprises a handle 22 configured like the grip portion of the sports implement, thus device 20 has a grip configured like the handle portion of a bat, having a first end 24 and a second end 26. The first end 24 corresponds to the normal proximal end (i.e., the end closest to the user) of the sports implement, the second end 26 corresponds to normal distal end (i.e., the end furthest from the user). The handle 22 is preferably made of wood, like a conventional bat, but it could also be made of some other material.

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Please replace the paragraph on page 3, line 23 with the following edited paragraph:

In the preferred embodiment the circumference of the handle is preferably between about ten and about thirty percent larger than the grip portion of a conventional sports implement, and most preferably about twenty percent larger than the grip portion of a conventional sports implement. The inventor has discovered that this helps focus the effect of the device on the user's forearms, yet still permits the user to securely grasp the device. Thus, in the case of device 20, where a conventional bat would have a grip diameter of between about 7/8 inches and about 1 and 1/8 inches, the handle 22 preferably has a diameter of between about 1 1/4 inches and about 1 1/2 inches, and most preferably about 1 and {fraction (11/32)} inches. The larger grip both isolates the forearms and safely strengthens the hands and wrists. However, the handle 22 could have the circumference of a conventional bat.

Please replace the paragraph on page 4, line 1 with the following edited paragraph:

A weight 28 is mounted on the second end 26 of the handle 22. The weight 28 is preferably made of steel, but could, of course be made of some other dense

material. The length of the handle 22 and the size and shape of the weight 28 are such that the center of mass of the device is positioned distally of beyond the graspable portion of the handle 22, between about 8 1/2 inches and about 15 inches from the first end 24 of the handle 22, and more preferably between about 10 and 13 inches from the first end of the handle 22. The weight of the weight 28 depends upon the needs and preferences of the user, the weight 28 may have a weight so that the device 20 weighs 3 1/2, 5, 7 1/2, 10, or 12 1/2 pounds, or preferably a set of devices 20 of different weights 28 are provided.

Please replace the paragraph on page 4, line 11 with the following edited paragraph:

As shown in the Figures, the weight 28 preferably has a generally cylindrical shape, and the top and bottom edges of the cylinder are preferably rounded. Of course the weight 28 could have some other shape, for example with a polygonal cross section, or the weight could be a rectangular prism. However, the inventor believes that the compact, cylindrical shape improves the swing dynamics of the device. In the preferred embodiment, the weight 28 for the 3 1/2 pound device has a diameter of about 2 3/8 inches, and is about 2 1/2 inches high; the weight 28 for the 5 pound device has a diameter of about 3 inches, and is about 2 3/4 inches high;

the weight 28 for the 7 1/2 pound device has a diameter of about 3 1/2 inches, and is about 3 inches high; the weight 28 for the 10 pound device has a diameter of about 3 3/4 inches, and is about 3 3/4 inches high; and the weight 28 for the 12 1/2 pound device has a diameter of about 4 inches, and is about 4 inches high.

Please replace the paragraph on page 5, line 7 with the following edited paragraph:

A second alternate construction of the first embodiment of a sports training and conditioning device is indicated generally as 20" in FIG. 5. The device 20" is similar in construction to device 20, comprising a handle 22 and a weight 28. However, in device 20" the attachment of the weight 28 to the handle 22 is different from the attachment in device 20. As shown in FIG. 5, a threaded bolt 40 extends through an axial bore 42 in the handle 22, projecting out the second end 26 of the handle 22. The bolt 40 is preferably made of metal. The weight 28 preferably has an internally threaded socket 44 to receive the bolt 40. A nut 46 is threaded on the end of the bolt 40 and is concealed in a recess 48 in the first end of the handle 22.

Please replace the paragraph on page 5, line 17 with the following edited paragraph:

A second embodiment of a sports training and conditioning device is indicated generally as 100 in FIG. 6. The device 100 is particularly adapted for training and conditioning for the sport of golf, and comprises a handle 102 configured like the grip portion of a golf club, having a first end 104 and a second end 106. The first end 104 corresponds to the normal proximal end (i.e., the end closest to the user) of the sports implement, the second end 106 corresponds to normal distal end (i.e., the end furthest from the user).

Please replace the paragraph on page 5, line 25 with the following edited paragraph:

In the preferred embodiment the circumference of the handle 102 is preferably between about ten and about thirty percent larger than the grip portion of a conventional sports implement, and most preferably about twenty percent larger than the grip portion of a conventional sports implement. The inventor has discovered that this helps focus the effect of the device 100 on the user's forearms, yet still permits the user to securely grasp the device 100. Thus, in the case of device 100, where a conventional golf club would have a grip circumference of

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between about $2\frac{3}{4}$ inches and about 3 inches, the handle 102 preferably has a circumference of between about 3 inches and about $3\frac{1}{2}$ inches. However, the handle 102 could have the circumference of a conventional golf club.

Please replace the paragraph on page 6, line 1 with the following edited paragraph:

A weight 108 is mounted on the second end 106 of the handle 102. The weight 108 is preferably made of steel, but could, of course, be made of some other dense material. The length of the handle 102 and the size and shape of the weight 108 are such that the center of mass of the device is positioned distally of ~~the~~ between about 8 inches and about 15 inches from the first end 104 of the device 100, and more preferably between about 10 and 13 inches. The weight of the weight 108 depends upon the needs and preferences of the user, the weight 108 may have a weight so that the device 100 weighs $3\frac{1}{2}$, 5, $7\frac{1}{2}$, 10, or $12\frac{1}{2}$ pounds, or preferably a set of devices 100 of different weights 108 are provided.

Please replace the paragraph on page 6, line 10 with the following edited paragraph:

As shown in FIG. 6, the weight 108 preferably has a generally cylindrical shape, and the top and bottom edges of the cylinder are preferably rounded. Of course the weight 108 could have some other shape, for example with a polygonal cross section, or the weight 108 could be a rectangular prism. In the preferred embodiment, the weight 108 for the 31/2 pound device has a diameter of about 23/8 inches, and is about 21/2 inches high; the weight for the 5 pound device has a diameter of about 3 inches, and is about 23/4 inches high; the weight 108 for the 71/2 pound device has a diameter of about 31/2 inches, and is about 3 inches high; the weight 108 for the 10 pound device has a diameter of about 33/4 inches, and is about 33/4 inches high; and the weight 108 for the 121/2 pound device has a diameter of about 4 inches, and is about 4 inches high for the 31/2 pound device has a diameter of about 23/8 inches, and is about 21/2 inches high; the weight 108 for the 5 pound device has a diameter of about 3 inches, and is about 23/4 inches high; the weight 108 for the 71/2 pound device has a diameter of about 31/2 inches, and is about 3 inches high; the weight 108 for the 10 pound device has a diameter of about 33/4 inches, and is about 33/4 inches high; and the weight 108

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for the 12 1/2 pound device has a diameter of about 4 inches, and is about 4 inches high.

Please replace the paragraph on page 6, line 27 with the following edited paragraph:

In the preferred construction of the device 100, the grip 102 comprises a rod 110 with an externally threaded stud 112 on its ~~distal end~~ second end 106. The rod 110 is covered with a conventional golf club grip 114. The threaded stud 112 is adapted to fit in an internally threaded socket 116 in the weight 108. The threaded stud 112 may be further secured in the socket 116 with an adhesive, such as an epoxy or other suitable adhesive. However, it may be desirable to have the weight 108 removably mounted on the handle 102, so that the user can have just one handle, and change the weight of the device 100 by changing the weight 108. Of course one of the other attachments for the weight 108 and handle 102 discussed above with respect to device 20, or any other method for securely connecting the weight 108 and the handle 102 can be used.

Please replace the paragraph on page 7, line 5 with the following edited paragraph:

A third embodiment of a sports training and conditioning device is indicated generally as 150 in FIG. 7. The device 150 is particularly adapted for training and conditioning for the sport of tennis, and comprises a grip 152 configured like the handle portion of a tennis racket, having a first end 154 and a second end 156. The first end 154 corresponds to the normal proximal end (i.e., the end closest to the user) of the sports implement, the second end 156 corresponds to normal distal end (i.e. the end furthest from the user). The handle 152 is preferably made of wood, metal, or a composite material, like a conventional racket, but it could also be made of some other material.

Please replace the paragraph on page 7, line 14 with the following edited paragraph:

In the preferred embodiment the circumference of the handle 152 is preferably between about ten and about thirty percent larger than the grip portion of a conventional sports implement, and most preferably about twenty percent larger than the grip portion of a conventional sports implement. The inventor has discovered that this helps focus the effect of the device 150 on the user's forearms,

yet still permits the user to securely grasp the device 150. Thus, in the case of device 150, where a conventional racket would have a grip circumference of between about $4\frac{1}{4}$ inches and about $4\frac{5}{8}$ inches, the handle 152 preferably has a circumference of between about $4\frac{3}{8}$ inches and about $4\frac{3}{4}$ inches. However, the handle 152 could have the circumference of a conventional racket. The handle 152 may include a conventional spiral wrap of leather or leather-like material, so that the handle 152 of the device 150 has the appearance and feel of the grip portion of a conventional racket.

Please replace the paragraph on page 7, line 27 with the following edited paragraph:

A weight 158 is mounted on the second end 156 of the handle 152. The weight 158 is preferably made of steel, but could, of course be made of some other dense material. The length of the handle 152 and the size and shape of the weight 158 are such that the center of mass of the device 150 is positioned between about 8 inches and about 15 inches from the first end 154 of the handle 152, and more preferably between about 10 and 13 from the first end 154 of the handle 152. The center of mass is preferably distal to the graspable portion of the handle 152. The weight of the weight 158 depends upon the needs and preferences of the user, the

weight 158 may have a weight so that the device 150 weighs $11/2$, $21/2$, $31/2$, $41/2$, or $51/2$ pounds, or preferably a set of devices 150 of different weights 158 are provided.

Please replace the paragraph on page 8, line 4 with the following edited paragraph:

As shown in FIG. 7, the weight 158 preferably has a generally cylindrical shape, and the top and bottom edges of the cylinder are preferably rounded. Of course the weight 158 could have some other shape, for example with a polygonal cross section, or the weight 158 could be a rectangular prism. In the preferred embodiment, the weight 158 for the $11/2$ pound device has a diameter of about $17/8$ inches, and is about 2 inches high; the weight 158 for the $21/2$ pound device has a diameter of about $21/8$ inches, and is about $21/4$ inches high; the weight 158 for the $31/2$ pound device has a diameter of about $23/8$ inches, and is about $21/2$ inches high; the weight 158 for the $41/2$ pound device has a diameter of about $21/2$ inches, and is about $25/8$ inches high; and the weight 158 for the $51/2$ device has a diameter of about $25/8$ inches, and is about $27/8$ inches high.

Please replace the paragraph on page 8, line 15 with the following edited paragraph:

In the preferred construction of the third embodiment, there is a collar 160 with an internally threaded socket 162 mounted on the second end 154 of the handle 152. The collar 160 is preferably made of metal and is secured on the handle by any conventional means. There is an externally threaded stud 164 on the weight 158 that threads into the internally threaded socket in the collar 160. The threaded stud 164 may be further secured in the socket 160 with an adhesive, such as an epoxy or other suitable adhesive. However, it may be desirable to have the weight 158 removably mounted on the handle 152, so that the user can have just one handle, and change the weight of the device 150 by changing the weight 158. Of course one of the other attachments for the weight 158 and handle 152 discussed above with respect to device 20, or any other method for securely connecting the weight 158 and the handle 152 can be used.

Please replace the paragraph on page 8, line 27 with the following edited paragraph:

A fourth embodiment of a sports training and conditioning device is indicated generally as 200 in FIG. 8. The device 200 is particularly adapted for training and

conditioning for the sport of hockey, and comprises a grip 202 configured like the handle portion of a hockey stock, having a first end 204 and a second end 206. The first end 204 corresponds to the normal proximal end (i.e., the end closest to the user) of the sports implement, the second end 206 corresponds to normal distal end (i.e., the end furthest from the user). The handle 202 is preferably made of wood, like a conventional hockey stick, but it could also be made of some other material.

Please replace the paragraph on page 9, line 4 with the following edited paragraph:

In the preferred embodiment the circumference of the handle 202 is preferably between about ten and about thirty percent larger than the grip portion of a conventional sports implement, and most preferably about twenty percent larger than the grip portion of a conventional sports implement. The inventor has discovered that this helps focus the effect of the device 200 on the user's forearms, yet still permits the user to securely grasp the device 200. Thus, in the case of device 200, where a conventional stick would have a grip circumference of between about 33/4 inches and about 41/4 inches, the handle 202 preferably has a

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circumference of between about 4 inches and about 4 1/2 inches. However, the handle 202 could have the circumference of a conventional racket.

Please replace the paragraph on page 9, line 14 with the following edited paragraph:

A weight 208 is mounted on the second end 206 of the handle 202. The weight 208 is preferably made of steel, but could, of course be made of some other dense material. The length of the handle 202 and the size and shape of the weight 208 are such that the center of mass of the device 200 is positioned between about 8 1/2 inches and about 15 inches from the first end 204 of the handle 202, and more preferably between about 10 and 13 inches from the first end of the handle 202. The center of the mass of the device is preferably distal to the end of the graspable portion of the handle 202. The weight of the weight 208 depends upon the needs and preferences of the user, the weight 208 may have a weight so that the device 200 weighs 3 1/2, 5, 7 1/2, 10, or 12 1/2 pounds, or preferably a set of devices 200 of different weights 208 are provided.

Please replace the paragraph on page 9, line 25 with the following edited paragraph:

As shown in FIG. 8, the weight 208 preferably has a generally cylindrical shape, and the top and bottom edges of the cylinder are preferably rounded. Of course the weight 208 could have some other shape, for example with a polygonal cross section, or the weight 208 could be a rectangular prism. However, the inventor believes that the compact, cylindrical shape improves the swing dynamics of the device 200. In the preferred embodiment, the weight 208 for the 31/2 pound device has a diameter of about 23/8 inches, and is about 21/2 inches high; the weight 208 for the 5 pound device has a diameter of about 3 inches, and is about 23/4 inches high; the weight 208 for the 71/2 pound device has a diameter of about 31/2 inches, and is about 3 inches high; the weight 208 for the 10 pound device has a diameter of about 33/4 inches, and is about 33/4 inches high; and the weight 208 for the 121/2 pound device has a diameter of about 4 inches, and is about 4 inches high.

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Please replace the paragraph on page 10, line 5 with the following edited paragraph:

In the preferred construction of the third embodiment, there is a collar 210 with an internally threaded socket 212 mounted on the second end 204 of the handle 202. The collar 210 is preferably made of metal and is secured on the handle by any conventional means. There is an externally threaded stud 214 on the weight 208 that threads into the internally threaded socket in the collar 210. The threaded stud 214 may be further secured in the socket 210 with an adhesive, such as an epoxy or other suitable adhesive. However, it may be desirable to have the weight 208 removably mounted on the handle 202, so that the user can have just one handle, and change the weight of the device 200 by changing the weight 208. Of course one of the other attachments for the weight 208 and handle 202 discussed above with respect to device 20, or any other method for securely connecting the weight 208 and the handle can be used.